Auto Temp II Heat Pump™

Programmable Thermostat For Single and Multistage Heat Pump Systems

Owner's Manual with Installation Directions

Model 44428

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Congratulations!

Welcome to the Hunter energy saving family of quality products.

Your Hunter Programmable Thermostat allows you to find your maximum comfort level using the least amount of fuel. Through smart programming, this thermostat should pay for itself during its first season of use.
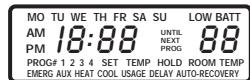
Thank you for buying Hunter products!

Features

■ **Manual Override**
For either temporary or constant temperature adjustments without program change.

■ **Fingertip Programming**
Easy touch keyboard. Keys "beep" when pressed.

■ **Low Battery Indicator**
"LOW BATT" flashes when its time to change the batteries.

■ **Vacation Override**
Provides permanent (vacation) temperature setting without program change.

■ **Convenient Programming Reference**
Simplified programming instructions are provided on inside of door cover for easy reference.

■ **Easy-to-Read Digital Display**
Digital clock (liquid crystal display) indicates time of day AM or PM, day of week, current room temperature, current program number, LO BATT indicator, heat and cool indicator when heat or cool is on, and usage indicator.

■ **Manual Override and Compressor Safety Delay**
Compressor safety restart "Delay" appears on display.
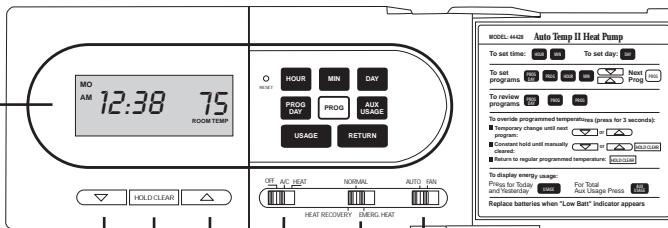
■ **Key Hole for Keyboard Lock**
You can prevent tampering of programs by selecting keyboard lock feature.
Key to lock keyboard.
For raising temperature.
For lowering temperature.
Manual override hold clear button.

■ **Fan ON and AUTO Selector switch.**

■ **Normal, Heat Recovery and Emergency Heat Switch**

■ **Function Switch**
Switch for turning on heat and cooling systems.

■ **Exclusive Energy Monitor**
Measures and displays the amount of time the heating or air-conditioning system has operated today and yesterday. By programming your thermostat and monitoring the energy usage, you can save 9% to 30% on your fuel bills.

For entering hour of day.

For entering minute of day.

For entering and reviewing programs.

For resetting computer back to factory program and clock to 12:00 am.

RESET

HOUR

MIN

DAY

For entering current day of week.

Day selection key for selecting weekdays, weekends or individual day for programming.

PROG DAY

PROG

AUX USAGE

Displays cumulative usage of auxiliary heat in hours and minutes.

Energy Monitor key recalls energy usage today and yesterday. LCD shows energy usage in hours and minutes.

USAGE

RETURN

Returns to current time and temperature.

▽

HOLD CLEAR

△

Key to lower temperature setting

Provides constant temperature setting by overriding stored programs, or converts to manual operation of thermostat. Also clears manual override to return to current program.

Key to raise temperature setting

Start Up

Don't Worry—Programming Is Easy!

This may seem to be a highly comprehensive and lengthy presentation of our product's features—don't be intimidated.

We have a lot to say because our product does have a lot of features. And we want to make sure you have complete information. You may find you'll want to use only a simple program…or all the features we have to offer.

Just follow this manual one step at a time and you should quickly begin to feel comfortable with your new thermostat.

Besides, we've installed preset programs at 78° for air conditioning and 68° for heating. These programs are up and running immediately at installation. In case you don't have time to enter your own programs right away.

You can generate significant savings with a programmable thermostat. The idea is to reduce usage when you don't need it—when you're not home or at night while everyone's asleep. For example, during the heating season you can program lower temperatures during the day while you're at work. Then program a comfortable temperature just before you get home, so you walk into a warm house.

Studies conducted by the Department of Energy estimate that setting your thermostat back 10° for two-8 hour periods on winter days can reduce your fuel bill as much as 30%. During the summer, setting your thermostat up 5° for two periods can reduce your fuel bill as much as 25%.

And the digital display on your thermostat gives you precise temperature control for convenience as well as maximum savings and comfort.

The thermostat is truly 7 day programmable and can hold separate programs for winter and summer. It is capable of holding 4 separate heat and 4 separate programs for cool, each day.

You can program Monday to Friday, Saturday and Sunday to have the same 4 programs as shown in the table or each day can have a different set of 4 programs. (4 for winter and 4 for summer).

Suggested winter and summer weekday and weekend programs are shown below.

Suggested Winter & Summer Programs

Mon.-Fri.	Time	Winter Temperature Settings	Summer Temperature Settings
Program 1	6:00 AM	68°	78°
Program 2	8:30 AM	60°	84°
Program 3	5:00 PM	68°	78°
Program 4	11:00 PM	58°	80°

Keyboard Lock Feature

Your thermostat is provided with an optional electronic keyboard lock. You may use this feature to prevent tampering with the programs. The keyboard can be made active by using the key provided with your thermostat.

If you elect to use this feature, remove the cover from the thermostat and look for the switch shown below on the printed circuit board near the key hole. Be careful not to disconnect any wires. Then slide the keyboard switch to "lock" mode.

Keyboard Lock Switch
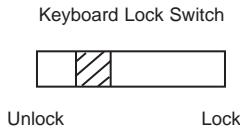
Unlock   Lock

Figure 1

Once the switch is moved to "lock" mode, no entry is possible by the thermostat keys. Even the manual override is not possible. To activate the keyboard (open lock) for changing programs or setting new time, insert the key in the key hole. After programming is completed, remove the key to lock the keyboard again.

If the keyboard selector switch is in "unlock" mode, there is no need to use key. Programs can be changed any time without using the key.
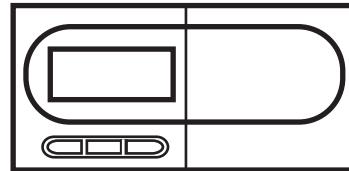
Insert key here for programming.

Figure 2

Reset

When you first install the three AA size batteries, as directed in the Installation Instructions, the thermostat automatically sets the day and time to Monday, 12:00 AM, shows the current room temperature and is programmed for 68° in heat mode and 78° in cool mode for all 7 days.

Press the reset button to reset and start the clock. Use a thin probe such as a straightened paper clip to gently push the reset button through the hole in the front panel. (See Figure 3.) The LCD display should read 12:00 AM, indicate the day of week as Monday (MO), the current room temperature of your house. If it shows random numbers or partial digits, press the reset button once again.
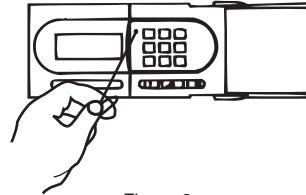
Figure 3

MO
AM 12:00   72
ROOM TEMP

■ Initial read-out after pressing reset button.
■ Current room temperature is 72°F.
■ Day of week is Monday (MO).
■ Time is 12:00 AM.

Setting the Time and Day of Week

The first data you should enter is the current time and day of the week.

EXAMPLE:
If the unit is being installed at 9:15 PM, Saturday, to set the thermostat, you would press the keys in the shown sequence:

	Display	
	MO AM 12:00 72 **ROOM TEMP**	■ Initial read-out after pressing reset button. ■ Current room temperature is 72°F.
HOUR	**MO AM** 12:00	■ Press the HOUR key. Temperature digits disappear, indicating time set mode.
HOUR	**MO PM** 9:00	■ Press and hold until 9:00 PM appears on display.
MIN	**MO PM** 9:15	■ Press and hold until 15 minutes appears on display.
DAY	**PM** 9:15 **SA**	■ Press 5 times until SA appears on display.
RETURN	**PM** 9:15 **SA**	■ Returns to normal time and temperature. ■ If return is not pressed, it will return automatically in 15 seconds.

Personal Program Schedule

Use this Personal 7 Day Program Schedule to determine which times and temperatures will best satisfy both your comfort and energy saving requirements. This will also be a helpful guide as you start programming your thermostat.

PROGRAM SELECTION TABLE

MONDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
TUESDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			

SAVE FOR FUTURE REFERENCE

WEDNESDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
THURSDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
FRIDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
SATURDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			
SUNDAY	TIME	WINTER TEMP	SUMMER TEMP
Program 1			
Program 2			
Program 3			
Program 4			

SAVE FOR FUTURE REFERENCE

Before Programming

■ To program for winter, the function switch (OFF-A/C-HEAT) must be in the HEAT mode.

■ Similarly, to program for summer, the function switch must be in COOL position.

■ You cannot program or view programs in OFF position.

■ Whenever the compressor is in 4 minute restart safety delay, "DELAY" will appear on the display. Compressor will turn on automatically when this 4 minute delay period is over. This feature is designed to protect your compressor from restarting too quickly which could damage the compressor.

■ Replace batteries as soon as low battery indicator appears on the display.

CAUTION: When the batteries are completely dead, the display will fade out and the thermostat will not switch "ON" your system.

Programming

Familiarize yourself with programming. In this example, your thermostat will be programmed for winter as per suggested program on page 4. However, you can program or change the program of each individual day.

To Program For Winter, Slide Function Switch To HEAT.

Weekday Programs

Button	Display	Notes
	PM 9:15 **SA** 72 **ROOM TEMP**	■ Normal display of time, temperature, and day of week.
PROG DAY	MO TU WE TH FR	■ Weekdays are selected.
PROG	MO TU WE TH FR 0:00 68 PROG# 1 HEAT	■ Program indicator (1) is displayed. ■ 68°F is displayed. ■ 0:00 space for time is displayed. ■ MO-FR is displayed.
HOUR	MO TU WE TH FR **AM** 6:00 68 PROG# 1 HEAT	■ Press and hold until 6:00 AM is displayed. ■ Weekday Program 1 is complete.
PROG	MO TU WE TH FR 0:00 68 PROG# 2 HEAT	■ Program Indicator (2) is displayed. ■ 0:00 space for time of second program is displayed.
HOUR	MO TU WE TH FR **AM** 8:00 68 PROG# 2 HEAT	■ Press and hold until 8:00 AM is displayed.
MIN	MO TU WE TH FR **AM** 8:30 68 PROG# 2 HEAT	■ Clock advances in increments of 15 minutes. Press each time until 30 minutes is displayed.
▽	MO TU WE TH FR **AM** 8:30 60 PROG# 2 HEAT	■ Press DOWN ARROW until 60°F is displayed.
PROG	MO TU WE TH FR 0:00 68 PROG# 3 HEAT	■ Program Indicator (3) is displayed.

Note: During the programming steps, if you don't make any entry within 15 seconds, the display will automatically return to current time and temperature. If this happens, just press the "PROGRAM" key to return to the program number you were entering.

Programming Your Thermostat (Cont.)

HOUR	MO TU WE TH FR PM **5:00** 68 PROG# 3 HEAT	■ Press and hold until 5:00 PM is displayed. ■ Weekday Program 3 is complete.
PROG	MO TU WE TH FR **0:00** 68 PROG# 4 HEAT	■ Program Indicator (4) is displayed.
HOUR	MO TU WE TH FR PM **11:00** 68 PROG# 4 HEAT	■ Press and hold until 11:00 PM is displayed.
▽	MO TU WE TH FR PM **11:00** 60 PROG# 4 HEAT	■ Press the DOWN ARROW until 60°F is displayed.
DAY	SA SU	■ SA and SU are selected.
PROG	SA SU **0:00** 68 PROG# 1 HEAT	■ SA and SU is displayed. ■ Program indicator (1) is displayed.
HOUR	SA SU AM **7:00** 68 PROG# 1 HEAT	■ Press and hold until 7:00 AM is displayed. ■ Saturday and Sunday Program is now complete.
PROG	SA SU **0:00** 68 PROG# 2 HEAT	■ Program indicator (2) is displayed.
HOUR	SA SU AM **8:00** 68 PROG# 2 HEAT	■ Press and hold until 8:00 AM is displayed.
MIN	SA SU AM **8:30** 68 PROG# 2 HEAT	■ Clock advances in increments of 15 minutes. Press and hold until 30 minutes is displayed.
▽	SA SU AM **8:30** 60 PROG# 2 HEAT	■ Press the DOWN ARROW until 60°F is displayed.

Programming Your Thermostat (Cont.)

PROG	SA SU *0:00* 68 PROG# 3 HEAT	■ Program indicator (3) is displayed.
HOUR	SA SU PM *4:00* 68 PROG# 3 HEAT	■ Press and hold until 4:00 PM is displayed.
PROG	SA SU *0:00* 68 PROG# 4 HEAT	■ Program indicator (4) is displayed.
HOUR	SA SU PM *11:00* 68 PROG# 4 HEAT	■ Press and hold until 11:00 PM is displayed.
▽	SA SU PM *11:00* 58 PROG# 4 HEAT	■ Press DOWN ARROW each time to decrease one degree. ■ When you reach 58°F, Program 4 is complete.
RETURN	SA PM *9:15* 72 PROG# 2 ROOM TEMP	■ Press to return to display current time, temperature, current program number, and day of week. If it is not pressed, thermostat will automatically return to current time and temperature in 15 seconds.

To program each individual day separately by a different set of programs, first select the day by displaying the day of program, then insert the desired times and temperatures.

PROG DAY	MO TU WE TH FR	■ MO-FR will have same program.
PROG DAY	SA SU	■ SA and SU will have same program.
PROG DAY	MO	■ Only Monday is selected.

Programming Your Thermostat (Cont.)

Use | PROG | HOUR | MIN | ▽ | △ | to enter programs for Monday.

| PROG DAY | TU | ■ Tuesday is selected. |

| PROG DAY | WE | ■ Wednesday is selected. |

Display the day to be programmed and use | PROG | HOUR | MIN | ▽ | △ | to enter programs.

NOTE: Another approach to programming is to first program all weekdays or weekends the same, then display a particular day | PROG DAY |

and change the programs of only that individual day by using | PROG | HOUR | MIN | ▽ | △ |

NOTICE: During the programming steps, if you don't make an entry within 15 seconds, the display will automatically return to current time and temperature. If this happens, just press the "PROGRAM" key to return to the program number you were entering.

• To program for summer, slide function switch OFF-A/C-HEAT to A/C. The programming is the same as you did for winter.

• Any change of time will be effective for both summer and winter. If your summer schedule is different, however, just revise the program.

• If program time is left at 0:00, that particular program will not be effective; e.g.

• If Program #2 has time 0:00, the thermostat will jump from Program #1 to Program #3.

Displaying Programs

To review programs for winter, slide function switch to HEAT.

PM 9:15 SA 72 ROOM TEMP

■ Normal display of time, temperature, and day of week.

Displaying Programs (Cont.)

PROG	MO TU WE TH FR AM **6:00** 68 PROG# 1 ROOM TEMP HEAT	■ 1st Weekday Winter program is displayed. ■ Program indicator (1) is displayed. ■ Monday through Friday indicator is displayed. ■ HEAT appears indicating heat program for Winter.
PROG	MO TU WE TH FR AM **8:30** 60 PROG# 2 ROOM TEMP HEAT	■ 2nd Weekday program is displayed. ■ Program indicator (2) appears. ■ Monday through Friday remains.
PROG	MO TU WE TH FR PM **5:00** 68 PROG# 3 ROOM TEMP HEAT	■ 3rd Weekday program is displayed. ■ Program indicator (3) appears. ■ Monday through Friday remains.
PROG	MO TU WE TH FR PM **11:00** 60 PROG# 4 ROOM TEMP HEAT	■ 4th Weekday program is displayed. ■ Program indicator (4) appears. ■ Monday through Friday remains.

To display programs for summer, slide function switch to A/C and press **PROG**

Note: If you wish to program the thermostat for an individual day (not the MO-FR or SA-SU programs), first display the particular day by pressing "PROG DAY" key and then use "PROG" key to display or change programs.
To review programs for summer, slide function switch to A/C.

To Review the Current Temperature Setting

	SA PM **9:15** 68 PROG# 2 ROOM TEMP	■ Current time and room temperature.
Press for 2 Seconds or Less: or	**70** 68 PROG# 2 SET TEMP ROOM TEMP HEAT	■ 70°F indicates the current setting of the thermostat. ■ 68°F indicates current room temperature. ■ If pressed for more than 2 seconds, you will manually override your present temperatures to a new setting as explained below.

Manual Override of Program

Sometimes you will want to "override" set programs for a particular occasion, and then return to your normal schedule later, without having to re-enter all your programs. Here are two ways to do this: "temporary" and "constant."

Temporary Manual Override
(OVERRIDE UNTIL NEXT PROGRAM)

In the following example, we are raising the temperature from a program setting of 70°F to a temporary setting of 72°F until the time of the next program change. You might use this, for example, on a holiday when you don't want the daytime set-back to take effect.

△	**70** **68** PROG# 2 SET TEMP ROOM TEMP HEAT	■ Press arrow to display current temperature setting. ■ 68°F is the current room temperature. ■ 70°F is the present program (#2) setting.
△	**72** **68** SET TEMP ROOM TEMP HEAT	■ Continue pressing arrow. After 3 seconds, the set temperature will begin to increase. Release the button at 72°F.
RETURN	SA PM **9:15** UNTIL NEXT PROG **68** HEAT	■ Current time and temperature indicator. ■ Showing temporary manual override is valid until next program. ■ If you do not press RETURN, it will automatically return in 15 seconds.

TO DISPLAY TEMPORARY MANUAL OVERRIDE SETTING YOU JUST ENTERED, PRESS EITHER ARROW FOR LESS THAN 2 SECONDS.

Constant Manual Override
(OVERRIDE UNTIL MANUALLY RETURNED TO PROGRAM)

In the event that you want to set one temperature for an extended period, such as vacation, use the constant manual override.

▽ or △	SA **68** **72** SET TEMP ROOM TEMP HEAT	■ Set the function switch to either "A/C" or "HEAT", depending on the season. ■ Press either arrow and hold for 3 seconds or more to achieve desired temperature setting. (55°F for example)
HOLD CLEAR	SA **55** **72** HEAT SET TEMP HOLD ROOM TEMP	■ Press HOLD/CLEAR to maintain override setting indefinitely. HOLD will flash on LCD. ■ Program number will disappear.
RETURN	SA PM **9:15** **72** HOLD ROOM TEMP	■ Press to return to display time, temperature, day of week. If it is not pressed, thermostat will automatically return to display of time, temperature and day of week in about 15 seconds.

TO DISPLAY CONSTANT MANUAL OVERRIDE SETTING YOU JUST ENTERED, PRESS EITHER ARROW FOR LESS THAN 2 SECONDS.

To Return To Program From Manual Override

**Press Once in
Constant Override
Mode and Twice in
Temporary Override Mode.**

| HOLD CLEAR |
| PM 9:15 SA 55 |
| PROG# 2 · ROOM TEMP |

■ Program number will appear. HOLD will disappear if you were in constant manual override.

Using the Energy Monitor Usage Review

Your thermostat has two energy Monitors: 1. USAGE: Measures total usage of air conditioning and heating (including Auxiliary Heating) systems. The usage can be displayed for present day (as of 12:01AM) and the previous day (as of 12:01AM through midnight). 2. AUXILIARY USAGE: Measures cumulative usage of auxiliary heat, up to 999 hours and 59 minutes. By monitoring your energy usage, you see how much the set-back periods are saving for you and you can test program adjustments which could save you even more. Use the table on page 16. Both of the energy monitor counters can be reset at any time.

**Press For
2 Seconds
Or Less**

| | PM 5:00 WE 68 PROG# 3 ROOM TEMP |
■ Normal display of time and temperature.

| USAGE | WE 03 21 USAGE |
■ Press USAGE REVIEW to display the amount of time the system has run today (Wednesday, since 12:01 AM). For example, 3 hours and 21 minutes. (If held for more than 2 seconds the counter will reset to zero.)

| USAGE | TU 08 42 USAGE |
■ Press again to display the amount of time the system ran yesterday (Tuesday, 12:01 AM through midnight).

| RETURN | PM 5:00 WE 68 PROG# 3 ROOM TEMP |
■ Returns to normal time and temperature.
■ Auto-return after 15 seconds if no key is pressed.

| AUX USAGE | 2 40 12 AUX USAGE |
■ To display total auxiliary heat usage since the last time auxiliary heat usage was reset.

| RETURN | PM 5:00 WE 68 PROG# 3 ROOM TEMP |
■ Returns to normal time and temperature.
■ Auto-return after 15 seconds if no key is pressed.

To reset the Energy Monitor's usage counter back to zero:

**Press and
Hold for 3-
4 Seconds**

| USAGE | or | AUX USAGE |
| 0:00 00 USAGE |

■ Resets all usage digits to zero.

Temperature Span

Your thermostat is pre-programmed at the factory to cycle various stages in a definite sequence. For example, if the program temperature for heat is 68°F and 78°F for A/C, the sequence of operation for various stages will be as per the following table.

TABLE

PROGRAM TEMP. HEAT = 68°F A/C = 78°F	HEAT ON	HEAT OFF	A/C ON	A/C OFF
Compressor Stage I (Y1)	67	69	79	77
Auxiliary Stage I (W1)	65	69	—	—
Auxiliary Stage II (W2)	64	69	—	—

In Heat Recovery Mode, the sequence of operation of different stages during the temperature recovery period is controlled to achieve the temperature recovery in an efficient and economical way.

Energy Usage Chart

The Hunter Thermostat measures, stores and displays the amount of time your heating or air conditioning system has operated the present day and the previous day.

This Energy Usage Chart will help you discover your most efficient

energy saving comfort zone by recording your energy usage on a daily basis.

Simply enter the hours displayed when you press the orange Energy Monitor Review Key.

Date Begin: Month _____ Day _____ Year _____

	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTAL
WEEK 1								
WEEK 2								
WEEK 3								
WEEK 4								
WEEK 5								
WEEK 6								
WEEK 7								
WEEK 8								
WEEK 9								
WEEK 10								
WEEK 11								
WEEK 12								
WEEK 13								
WEEK 14								
WEEK 15								
WEEK 16								
WEEK 17								
WEEK 18								
WEEK 19								
WEEK 20								

Different Operation Modes

Your thermostat has an additional operational switch which enables you to select 3 different modes of operation for heating.

1. Normal Operation:
In this operation your thermostat will function in accordance to your heating and A/C programs. The sequence of operation of different stages will be as per table on page 28.

2. Emergency Operation:
In this operation the compressor will not operate. Only auxiliary heat will control the room temperature as per your heating program. For example, you might select this mode to bypass your heat pump, if you suspect it is not operating properly.

3. Auto Recovery Operation:
See next section for detailed explanation.

What Is Temperature Recovery?

Consider the following example for explanation.

Suppose the thermostat is programmed to turn the heat on at 6:00 AM to raise the temperature from a set-back temperature of 60°F to 68°F. In the normal operation mode, the heat will turn on at 6:00 AM and begin to raise the temperature to 68°F. The room will attain 68°F sometime after 6:00 AM, for example 30 minutes later at 6:30 AM.

The time to raise the temperature from 60°F to 68°F will depend on several factors like outside temperature, efficiency of the unit and insulation of the house. At about 6:30 AM the temperature in the house will be the desired temperature of 68°F.

In temperature recovery mode, the heat will turn on sometime before 6:00 AM, so that at 6:00 AM, the program time, the temperature in the house will already have achieved the desired temperature of 68°F. This early turn on time period is called recovery time.

The Hunter Energy Monitor has an exclusive method built into the thermostat computer. This method is designed to maximize efficiency of recovery in the most economical way, without the use of auxiliary heat (or minimum use if necessary), which will result in maximum savings in various weather conditions.

How Does Temperature Recovery Work? Consider The Following Example.

PROGRAM #	TIME	PROGRAM TEMPERATURE
1	6:00 AM	68°F
2	8:30 AM	60°F
3	4:00 PM	68°F
4	11:00 PM	58°F

Present time is 2:00 AM, the effective current program is number 4. The next program is at 6:00 AM at 68°F.

In the normal operation, at 6:00 AM, the furnace will turn on to raise the temperature from 58°F. Your house will attain 68°F some time after 6:00 AM. For our understanding, say 6:35 AM. The time required to reach 68°F will depend upon outside temperature on that day and the efficiency of your heating system.

In temperature recovery operation, your system will gradually raise the house temperature some time prior to 6:00 AM, o that at 6:00 AM your system will have achieved the programmed temperature.

The time to activate temperature recovery and sequence of operation of different stages of the system is set by an internal computer after several complex computations based on how "hard" your system needs to work to maintain the programmed temperature.

At 6:00 AM, the recovery cycle stops and automatically controlling the system normally, auto recovery will also take place during program 2, to raise the temperature from 60°F to 68°F just prior to reaching program 3 at 4:00 PM.

We recommend using this exclusive feature of auto recovery as often as you can to optimize the efficient use of energy.

When temperature recovery is activated, "AUTO RECOVERY" will appear, indicating that recovery has begun. When the set temperature is achieved and the next program time is reached, the recovery cycle ends and the "AUTO RECOVERY" will disappear from the display.

NOTE: Auto Recovery will not be activated in manual override modes.

Trouble Shooting

Problem	Solution
SCRAMBLED OR DOUBLE DISPLAY (numbers over numbers)	1. Remove clear mylar sticker.
NO DISPLAY	1. Check battery connections and batteries. 2. Press reset button once with a small pin and hold in for two seconds.
ENTIRE DISPLAY DIMS	1. Replace batteries.
PROGRAM DOES NOT CHANGE AT YOUR DESIRED SETTING	1. Check that time is set properly to "AM" or "PM." 2. Check that thermostat is not in "HOLD" mode. 3. Check for correct day setting.
HEATING OR COOLING DOES NOT GO ON OR OFF	1. Check that function switch is in correct position ("HEAT" or "COOL"). 2. There may be as much as 20 seconds delay in the thermostat turning the system on - wait and check. 3. Check your circuit breakers and switches to ensure there is power to the system. 4. Replace batteries. 5. Make sure your furnace blower door is closed properly.
ERRATIC DISPLAY	1. Press the reset button once with a small pin and hold in for two seconds. Then reprogram.
IF UNIT CONTINUES TO OPERATE IN OFF POSITION	1. Replace unit.
THERMOSTAT READS EE, HI, LO AT NORMAL ROOM TEMPERATURE	1. Replace unit.

IMPORTANT

1 Read the entire installation section of this Installation Manual thoroughly before you begin to install or operate your thermostat.
• Remove the mylar label from the display window.

INSTALLATION

2 All installation is normally performed at the thermostat.

OPERATION

3 This Hunter Thermostat is designed to operate with most single and multistage heat pumps having 24V controls. The system will control two stages of compressor and two stages of auxiliary heat. The relay current is limited to 1.0 amps for each stage.

COMPRESSOR PROTECTION

4 The thermostat provides a 4-minute delay after shutting off the compressor before it can be restarted. This feature will prevent damage to the air conditioner compressor caused by rapid cycling. It does not provide a delay when there are power outages.

TEMPERATURE RANGE

5 This thermostat can be programmed between 40°F and 90°F. However, it will display room temperatures from 32°F to 99°F.

POWER FAILURE

6 The thermostat is fully battery operated and does not require power from the control circuit. Whenever the main power is interrupted or fails, the battery power retains the programs and current time.

BATTERY WARNING

7 When the batteries are low, "LOW BATT" indicator on the display will flash. When this happens, install new batteries **(do not use old batteries)** as soon as possible. The batteries should last one year.

CAUTION: The batteries are the only source of power used to operate the system. If the batteries are not replaced, the display will dim and the heating and cooling system will stop operation.

Remove Old Thermostat

This thermostat comes with two #8 slotted screws and two wall anchors for mounting. To install your unit, you should have the following tools and materials.

- Slotted screwdriver
- Hammer
- Electric drill and 3/16" bit
- Three 1.5 (AA) Size Alkaline batteries

CAUTION: Do not remove any wiring from existing thermostat before reading the instructions carefully. Wires must be labeled prior to removal.

- Turn off the power to the furnace at the main power panel or at the furnace.
- Remove existing thermostat cover and thermostat. Some thermostats will have screws or other locking devices that must first be removed. Once wall mounting plate is exposed, look for wires.

  If wires are not visible, they may be connected to the back of the wallplate. Again, look for screws, tabs, etc. Some models have doors that open to expose wires and mounting screws. (See Figure 1.)

TYPICAL HOME THERMOSTATS

FIG. 1

| Wall Mounting Plate | Thermostat | Cover | Wall Mounting Plate | Thermostat | Cover |

Label Wires

- Each wire coming from the wall to the existing thermostat is connected to a terminal point on that thermostat. Each of these terminal points is usually marked with a code letter shown in Table A.

- Before disconnecting any wires, apply the self-adhesive labels provided to the wire as shown in Table A. (For example, attach the label marked W to the wire which goes to the W or H terminal on the existing thermostat.) IGNORE THE COLOR OF THE WIRES since these do not always comply with the standard.

Table A

If the code letter on the existing thermostat is	Then mark wire with label shown	Function	Comments
R, R_H, R_C (V), (VR)	R	24V Wire	Hot wire of 24V transformer
Y, Y_1, (M), (M_1)	Y_1	First stage of compressor	Activates when first stage of compressor is called (Heater/Cool)
W, W_1 (M)	W_1	First stage of auxiliary heating (First stage heat in NR mode)	Activates when first stage of auxiliary heat is called or compressor heat in NR mode
W_2 (Y_2)	W_2	Second stage of auxiliary heating (First stage of auxiliary heat in NR mode)	Activates only when second stage of auxiliary heat is called
G (F)	G	Fan	Always activates when system is on
E	E	Emergency heat relay (If available) Controls outdoor thermostat	Always on in emergency mode; off in normal mode
A	A	Normal compressor operation relay (If available)	Always on in normal mode; off in emergency mode
O, B (SEE NOTE 1)	O/B	Reversing valve operation	RO = Activates in cool mode RB = Activates in heat mode NR = Does not activate
B, C, (X)	C	Common wire (If available)	Common wire of 24V AC transformer

NOTE: 1. If "O" and "B" are both available, then "B" is the common wire in most of the cases.

The number of wires in the system can be as few as four (for single stage heat pump systems), as many as eight, or any number in between for multistage heat pump systems. If you follow the labeling procedures correctly, you don't have to be concerned about how many wires there are.

■ After labeling wires, disconnect them from the existing thermostat terminals.

■ Remove existing wallplate. To make sure wires do not fall back into wall opening, tape them to the wall.

■ If hole in wall is larger than necessary for wires, seal this hole up so no hot or cold air can enter the back of the thermostat from the wall. This air could cause a false thermostat reading.

Mount Wallplate and Thermostat

Snap open the wallplate from the thermostat. Disconnect connector 1 and 2 by pulling the leads from the terminal socket. (Figure 2)

Position wallplate on wall and pull existing wires through large opening.

Then level for appearance. Use any two of the many rectangular holes provided on the wall plate for mounting. Mark holes for plastic anchors provided if

existing holes do not line up with the Hunter Thermostat holes. (Figure 2A)

Drill holes with 3/16" bit, and gently tap anchors into the holes until flush with wall.

Reposition wallplate to wall, pulling wires through large opening. Insert mounting screws provided into wall anchor and tighten.
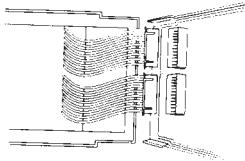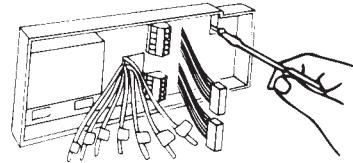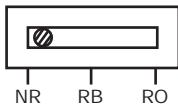

FIG. 2

FIG. 2A

Selector Switch

There are three types of heat pump connections relating to the reversing valve. Look for this switch on the printed circuit board.

NR   RB   RO

If the wire is connected to	Reversing Valve Function	Set Selector Switch To
O	Activates in cool mode	RO
B	Activates in heat mode	RB
W	Connection made internally. No terminal at thermostat (no O or B terminal marked) – instead, there is a separate connection for 1st stage heat.	NR

■ Match and connect the labeled wires to the appropriate coded terminal connector on the mounting plate. (See Figure 3A.) Ignore any wires which may be present, but which were not connected to the old thermostat.

■ Push excess wire back into hole to prevent interference with mounting of the thermostat cover.

■ Insert three AA size batteries into the wallplate as shown in Figure 4, observing the polarity marked on the unit.

■ Make sure the Function switch is set at OFF, and the FAN-AUTO switch is in AUTO. Push the connectors at the end of each Thermostat wire onto the appropriate coded terminals on the wallplate, matching the colors. (See Figures 3 and 3A.)

■ Line up the thermostat cover with wallplate, insert faceplate screws and tighten.

■ Carefully connect connectors 1 and 2 back to terminal socket. (See Figure 4.)

■ Switch on the main power. Press the reset button to reset and start the clock. Use a thin probe, such as a straightened paper clip, to gently push the reset button through the hole in the front panel. (See Figure 5.)

■ If you haven't already done so, remove the mylar label from the display window.

■ The LCD display should read 12:00 AM, showing the current room temperature of your house. If it shows random numbers or partial digits, press the reset button once again.

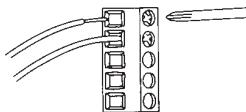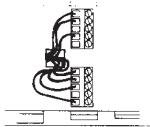The installation is now complete. Complete operating instructions begin at the front of this manual.
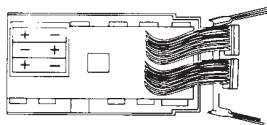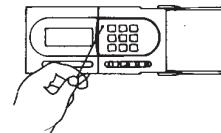
Figure 3

Figure 3A

Figure 4

Figure 5